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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/574,092

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Nello Nigro

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EXAMINER

SUNG, GERALD LUTHER

ART UNIT

PAPER NUMBER

3741

MAIL DATE

DELIVERY MODE

04/15/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/574,092	Applicant(s) NIGRO, NELLO	
	Examiner GERALD L. SUNG	Art Unit 3741	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 March 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 5-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 5-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the arguments and amendments filed on 27 March 2009. This action is made non-final in view of the new rejection.

Response to Arguments

2. Regarding the Applicant's arguments that the previous rejection should not have been made final because of an introduction of a new grounds of rejection, the Examiner is reminding the Applicant that the grounds of rejection have not been changed, rather the interpretation of the applied art has been changed; therefore the rejection had been made final properly. Nevertheless, the previous grounds of rejection have been removed in view of a more appropriate rejection.

3. Regarding the Applicant's arguments as to the clarity of the rejection, if the Applicant has issues or concerns with the action, the Examiner invites the Applicant to contact the Examiner at the number listed below.

4. Regarding the Applicant's arguments that the power system operates in two separate modes, where the air compressor would be on standby during mode A... the claims do not clearly distinguish the operational sequence, rather the claims only recite that there are two modes and how each mode works (i.e. the implementation of each mode with respect to each other is not clearly defined).

5. Applicant's arguments with respect to claims 1 and 5-12 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1 and 5-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Regarding claim 1, the limitation "operating in a second mode by:... using the heated combustion products and the flue gas to drive the gas turbine..." renders the claims indefinite because it is unclear whether the flue gas recycling found in mode A is being referred to.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 1 and 5-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ooka CA 2,465,384 in view of Andersen et al US 2003/0131582.

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12. Regarding claim 1, Ooka discloses a gas turbine system where the normal operation of the system would have yielded the method of supplying coal bed methane 6, and oxygen gas 3 from an air separation unit 3, flue gas (coming out of the dashed line from the condenser which would thereby be predominantly CO₂) to a combustor 12 of a GT engine, combusting the coal bed methane, using the heated combustion products and the flue gas to drive the GT engine 13, supplying a hot flue gas stream to an HRSG 21, using the heat of the flue gas to generate steam by way of heat exchange with water from the water feed pump 28, supplying steam from the HRSG 21 to a steam turbine 22 and using the steam to drive the steam turbine, supplying a part of the flue gas stream from the GT engine that passes through the HRSG 21 to a combustor via compressor 11 and the remainder of that stream is passed to a suitable underground storage region 7. The normal operation would have further yielded the steps of supplying coal bed methane 6 and an oxidizer are combusted in the coal bed methane where the heated products and flue gas from the flue gas recirculation circuit are used to drive a turbine 13, the flue gas is sent to an HRSG and steam is generated to drive a steam turbine. Ooka does not disclose the use of the compressor 11 to supply air to the oxygen generator 3 or to the combustor 14.

13. Referring to the embodiments of figures 4 and 10 of Andersen, Andersen shows that air from a compressor may be used to supply the air to an air separation unit, as well as a separate embodiment where air can be supplied directly from an air compressor to a combustor (even with the presence of an oxygen generator).

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14. One of ordinary skill in the art at the time of the invention would have found it obvious to include a path providing air from the air compressor 11 to the oxygen generator 3 and a path providing air from the air compressor 11 to the combustor 12 of the system of Ooka as taught by Andersen for the following reasons: providing air to the oxygen generator via an air compressor would allow for a larger volume of air to be separated at any given time (thereby providing a larger volume of oxygen to be combusted) and providing a direct path of air from the air compressor to the combustor would allow for the operation of the power plant when oxygen generation in the oxygen generator 3 has stopped.

15. Regarding claim 5, the storage of the remainder of the CO₂ stream is stored as a liquid via gas compression module 4.

16. Regarding claim 6, the underground storage region 7 is a coal bed seam.

17. Regarding claim 7, methane is extracted from the underground storage coal bed seam.

18. Regarding claim 8, the flue gas stream to the underground storage region is supplied via structure 5 which is in existence and therefore interpreted as an existing well structure.

19. Regarding claim 9, Ooka discloses the step of separating water from the flue gas via condenser 15.

20. Regarding claims 10 and 11, Ooka discloses the step of compressing a portion of the CO₂ stream (i.e. flue gas stream) via compressor 11 and supplying that portion to a combustor 12. The remainder of the stream is sent to a compression module 4 where

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the flue stream is compressed to a higher pressure, cooled into a liquid phase and supplied to an underground storage region 7.

21. Regarding claim 12, the combination of Ooka and Andersen discloses the method of supplying air from the air compressor 11 to the oxygen generator 3 to produce oxygen.

Conclusion

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to GERALD L. SUNG whose telephone number is (571)270-3765. The examiner can normally be reached on M-F 9am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cuff can be reached on (571) 272-6778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Gerald Sung
Patent Examiner
GS
10 April 2009

/Michael Cuff/
Supervisory Patent Examiner, Art Unit 3741